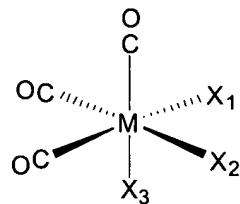


**AMENDMENTS TO THE CLAIMS:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

Please cancel claims 1-33.

34. (New) A method for the treatment of a cancer, the method comprising:  
administering to a patient afflicted with the cancer a metal tricarbonyl compound of the general formula:



wherein

M is rhenium or technetium or an isotope thereof;  
at least two of X1, X2 and X3 are monodentate ligands; or  
two of X1, X2 and X3 are part of a bidentate ligand and the other one is optionally a monodentate ligand.

35. (New) The method of claim 34, wherein the monodentate ligand is selected from the group consisting of halogens, CO, aromatic heterocycles, thioethers, and isocyanides.

36. (New) The method of claim 35, wherein the halogens are selected from the group consisting of bromo, iodo, fluoro, and chloro.

37. (New) The method of claim 35, wherein the aromatic heterocycles are selected from the group consisting of pyridine, pyrimidine, pyrazine, imidazole, pyrazole, triazole, tetrazole, thiazole, oxazole, purine, and organic molecules having one of this group as an integral part.

38. (New) The method of claim 37, wherein the purine is guanine or 9-methyl guanine.

39. (New) The method of claim 35, wherein the thioethers are selected from the group consisting of linear substituted dialkyl thioethers, cyclic thioethers, tetrahydrothiophen, and organic molecules containing a thioether functional group.

40. (New) The method of claim 35, wherein the isocyanides are selected from the group consisting of organic molecules comprising a terminal NC group coupled to an alkyl chain optionally comprising a -COOH, -NH<sub>2</sub>, -X, -SH, or -OH functional group.

41. (New) The method of claim 35, wherein the bidentate ligand is an amino acid or dicarboxylate.

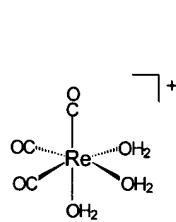
42. (New) The method of claim 41, wherein the amino acid is an anionic amino acid.

43. (New) The method of claim 41, wherein the amino acid is a non-natural  $\alpha$ - or  $\beta$ -amino acid.

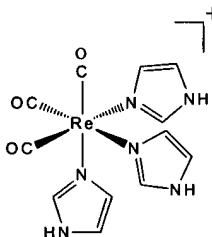
44. (New) The method of claim 43, wherein the non-natural amino acid is N,N-dimethyl glycine.

45. (New) The method of claim 34, wherein at least two of the ligands of the tricarbonyl complex shown in formula I are exchanged by guanine or guanosine after three days at 37° C with guanine or guanosine being present in a slight excess over rhenium or technetium.

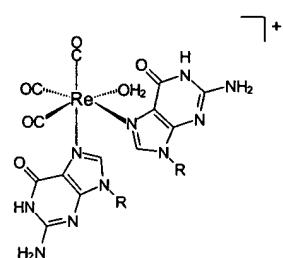
46. (New) The method of claim 34, wherein the compound is a compound selected from the group consisting of:



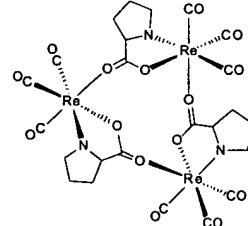
1



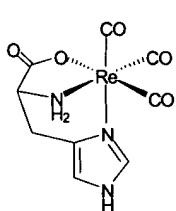
2



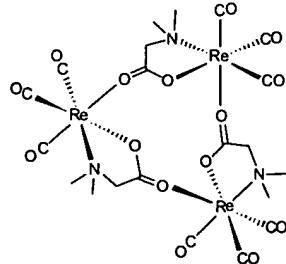
3



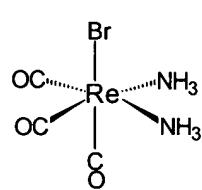
4



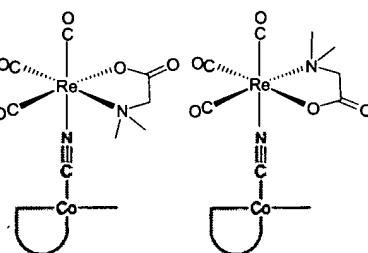
5



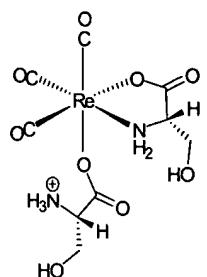
6



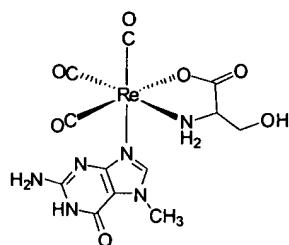
7



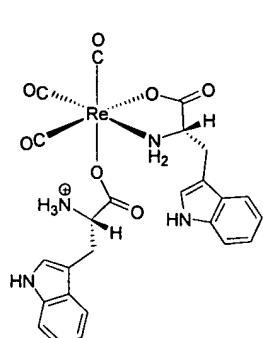
8 and 9



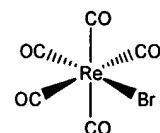
10



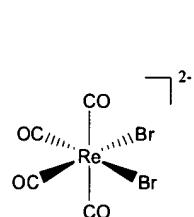
11 (L-Ser)  
and 12 (D-Ser)



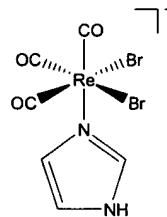
13



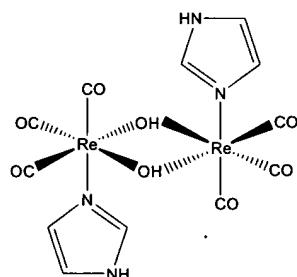
14



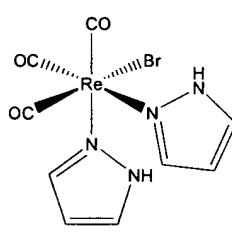
15



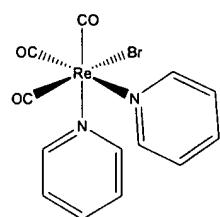
16



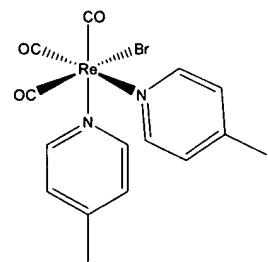
17



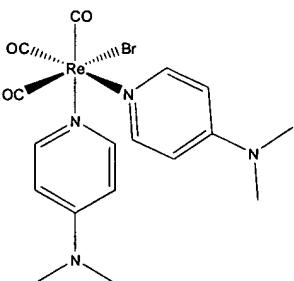
18



19



20



21

and combinations thereof.

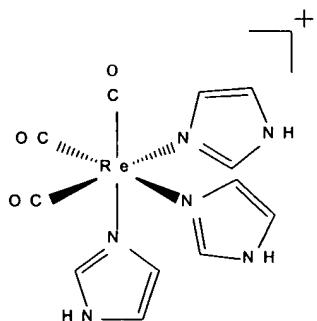
47. (New) The method of claim 34, wherein X1 and/or X2 and/or X3 are coupled to a targeting moiety.

48. (New) The method of claim 47, wherein the targeting moiety is selected from the group consisting of bombesin, neuropeptides, somatostatin, glucosamine, nucleosides, nuclear localizing sequence peptides (NLS peptides) oligonucleotides, nucleus targeting molecules such as anthracyclines, acridines and other intercalators, and derivatives or analogues thereof.

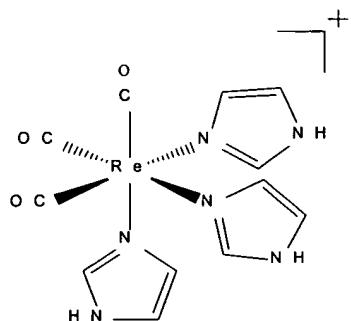
49. (New) The method of claim 34, wherein the metal tricarbonyl compound is chemotoxic.

50. (New) The method of claim 34, wherein the metal tricarbonyl compound is a radiotherapeutic prodrug.

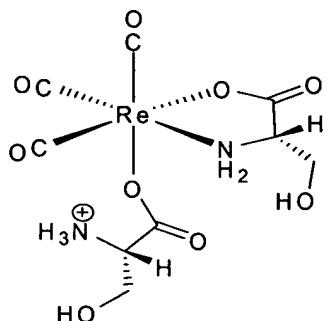
51. (New) A compound selected from:



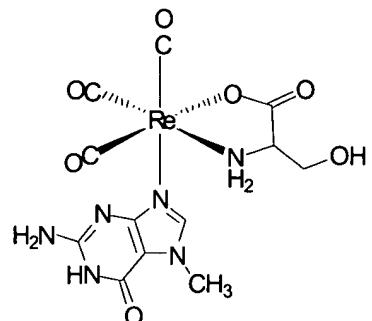
2



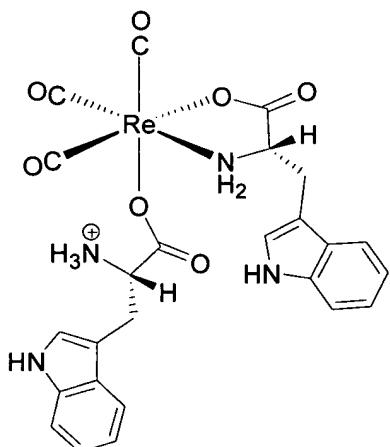
6



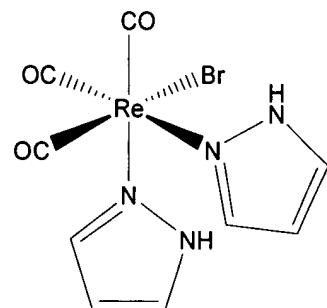
10



11 (L-Ser) and 12 (D-Ser)



13



18

52. (New) The compound of claim 51, further coupled to a targeting moiety.

53. (New) The compound of claim 52, wherein the targeting moiety is selected from the group consisting of bombesin, neurotensin, somatostatin, glucosamine, nucleosides, nuclear localizing sequence peptides (NLS peptides) oligonucleotides, nucleus targeting molecules such as anthracyclines, acridines and other intercalators, and derivatives and analogues thereof.